

Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

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Bozeman, MT 59715

1. Type of action: Application for Beneficial Water Use Permit 40S 30065688
2. Water source name: 3 Groundwater Wells
3. Location affected by project: The project proposes to appropriate groundwater from three wells located in Section 21, Township (T) 28 North (N), Range (R) 58 East (E), Roosevelt County.
4. Narrative summary of the proposed project, purpose, action to be taken, and benefits:
The project proposes to appropriate groundwater from three wells in order to provide water for municipal purposes in the Harvest Springs Subdivision. Two of the wells have been drilled and are located in the NESWNWNW and NENWSWNW of Section 21, T28N, R58E, Roosevelt County. The applicant is requesting 900 gallons per minute (GPM), 300 per well, up to 326.1 acre-feet (AF) to provide water for 490 households, 80.35 acres of lawn and garden irrigation and 10 commercial lots. The water would be used year round for municipal purposes. The Harvest Springs Subdivision is located in the NW of Section 21, T28N, R58E. Two of the wells have been drilled to depths of 177 and 180 feet by a licensed driller.

The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311, MCA are met.
5. Agencies consulted during preparation of the Environmental Assessment:
(include agencies with overlapping jurisdiction)
 - Montana Department of Natural Resources (DNRC), Water Management Bureau- Attila Fohnagy and Russell Levens, Groundwater Hydrologists
 - Montana Natural Heritage Program (MTNHP)
 - Montana Department of Fish, Wildlife & Parks (DFWP)
 - USDA Web Soil Survey

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity - *Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

Determination: No significant adverse impact. The proposed project would appropriate groundwater and is expected to deplete 98 GPM from the Missouri River, from the mouth of Little Muddy Creek downstream. The reach of the Missouri River where depletion from the proposed groundwater wells may occur is not identified as a chronically or periodically dewatered stream by the Montana Department of Fish, Wildlife and Parks (DFWP). The DFWP has a water reservation on the Missouri River upstream of the depleted reach to maintain instream flows. However, the physically availability analysis shows a depletion of 98 GPM is very unlikely to have an impact on the surface water flows of the lower Missouri River.

Water quality - *Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

Determination: No significant adverse impact. The proposed project would appropriate groundwater and is expected to deplete 98 GPM from the Missouri River, from the mouth of Little Muddy Creek downstream. The Lower Missouri River is listed on the TMDL 303(d) list for not supporting aquatic life. The impairment to aquatic life is likely from hydro structure flow regulation and modification. Issuance of the requested appropriation is unlikely to have any impact on water quality.

Groundwater - *Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

Determination: No significant adverse impact. Analysis of the aquifer characteristics shows the annual volumetric flux to be 3268 AF per year, while the existing legal demands are 2585.8 AF per year within the zone of influence. Given the quantity of water within the zone of influence, the quality of water will not be adversely affected. Although it has been determined a net depletion of 98 GPM may occur on a reach of the Lower Missouri River, it is unlikely the depletion will have an impact on surface water flows.

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

Determination: No impact. The proposed wells are to be equipped with Grundfos 300S400-9, 40 horse power 3 phase combined pump and motor system. The ideal pumping range for this system is 300 GPM, which is the flow rate the Applicant requested for each well.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species - *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

Determination: No adverse impact. The Montana National Heritage Program identified 4 animal species of concern in the proposed project area. The animal species of concern are: Nelson's Sparrow (*Ammodramus nelsoni*), Bobolink (*Dolichonyx oryzivorus*), Whooping Crane (*Grus Americana*) and Sedge Wren (*Cistothorus platensis*). The proposed subdivision is in an area used previously for agricultural purposes and should not adversely impact the identified species of concern.

Wetlands - *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Determination: The proposed project does not involve wetlands; however, the proposed site is adjacent to Shotgun Creek. The proposed site is not located in a FEMA regulatory flood plain; but due to its close proximity to Shotgun Creek, the subdivision may be located in or close to the natural flood plain.

Ponds - *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: The proposed project does not involve ponds.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

Determination: No significant adverse impact. According to the USDA Web Soil Survey, the type of soil for proposed place of use is primarily Tally-Lihen sandy loams. This type of sandy soil drains well and is not prone to saline seep. Since the proposed project is a subdivision, the construction of houses and establishing lawns and gardens should increase soil stability and have negligible effects to moisture content.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

Determination: No significant impact. The proposed project is a subdivision and individual homeowners will be responsible for maintaining a weed management plan for their property.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Determination: No significant impact. There may be a slight deterioration of air quality during the construction phase of the subdivision. However, the construction phase will be temporary and air quality should improve as houses are completed.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.*

Determination: N/A, the project is not located on State or Federal land.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: No additional impacts on environmental resources of land, water and energy not already addressed were identified.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: No significant adverse impact. There have been no environmental plans or goals identified that will be affected by this project.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

Determination: No significant adverse impact. There are no wilderness areas immediately adjacent to the proposed project and therefore it will not impact access to or quality of recreational and wilderness areas.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

Determination: No significant adverse impact. The project will not impact human health.

PRIVATE PROPERTY - *Assess whether there is any government regulatory impacts on private property rights.*

Yes ___ No X *If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.*

Determination: The project does not impact government regulations on private property.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

- (a) Cultural uniqueness and diversity? No impacts identified.
- (b) Local and state tax base and tax revenues? No significant impacts identified. Potentially, the local and state tax base and revenue could increase in the area.
- (c) Existing land uses? No impacts identified.
- (d) Quantity and distribution of employment? No significant impacts identified. The project has the potential to increase the demand for services in the Bainville area and create employment.
- (e) Distribution and density of population and housing? No significant impacts identified. The development of the subdivision would increase the population in the Bainville area.
- (f) Demands for government services? No significant impacts identified. An increase in residence may increase the demands for governmental services.
- (g) Industrial and commercial activity? No impacts identified. The development is for municipal purposes, including commercial, domestic, and lawn and garden irrigation.
- (h) Utilities? No significant impacts identified. The subdivision will need utilities; however, there shouldn't be a significant impact to utility services.
- (i) Transportation? No significant impacts identified.
- (j) Safety? No impacts identified.
- (k) Other appropriate social and economic circumstances? No impacts identified.

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts No secondary impacts have been identified.

Cumulative Impacts No cumulative impacts have been identified.

3. *Describe any mitigation/stipulation measures:*

- 4. *Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*** No reasonable alternative to the proposed action has been identified. The no action alternative would leave the subdivision without a beneficial water use permit and result in non-compliance with the Montana Water Use Act.

PART III. Conclusion

1. Preferred Alternative: As proposed. No significant impacts exist that would require an alternative action.

2 Comments and Responses: None at this time.

3. Finding:

Yes ___ No X Based on the significance criteria evaluated in this EA, is an EIS required?

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action: An EA is the appropriate level of analysis for this action. There are no significant impacts identified as defined in ARM 36.2.524, therefore an EIS is not required.

Name of person(s) responsible for preparation of EA:

Name: Jennifer Daly

Title: Water Resource Specialist

Date: March 28, 2014